

Appl. No. 10/630,823
Amdt. dated December 21, 2004
Reply to Office action of August 5, 2004.

Amendments to the Specification:

Please amend the abstract as follows.

~~An image projector that modifies projected images.~~ A system for adjusting keystone in a projector may include sensing using an imaging device at least two boundaries defining a projection screen and determining a transformation to adjust the keystone of an image projected from the projector. The image may be modified from the projector in accordance with the transformation and projecting the modified image from the projector, wherein the imaging device and the projector are maintained in a fixed relationship with respect to each other,

Please amend the title as follows.

PROJECTION SYSTEM THAT ADJUSTS FOR KEYSTONING

Please amend the paragraph on page 5 as follows.

The present inventors further considered the projector system described in R. Sukthankar et al., "Smarter Presentations: Exploiting Homography In Camera-Projector Systems," IEEE ICCV Conference, 2001, described above, and determined that while the use of the single camera can be used to estimate the parameters of the keystone effect, however, there is no guarantee that the projected image after keystone correction maintains the correct aspect ratio. In particular, the system taught by Sukthankar et al. needs to compute C which is a mapping between the projected image frame and the viewer image frame. This is performed by detecting the four screen corners in the image domain, the four physical screen corners, and then solve for C. Unless the physical screen happens to have the same aspect ratio as the screen the system can not obtain the correct aspect ratio. To overcome such a limitation the present inventors

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determined that interactivity with the user and the projection system can overcome such aspect ratio limitations.